

What is claimed is:

1. An information processing apparatus, having
an object network as a language processing
5 function and a common platform as an
interface function with clients, for
executing processes using an interface with
concerned parties of the process and / or
an environment, comprising:
10 the object model having a hierarchical
structure composed of,
a data model representing an attribute
structure as a set of templates;
an object model as a higher model than the
15 data model;
a role model as a higher model than the object
model, the role model representing the content of a
process to be executed in the environment as a set
of a plurality of object models; and
20 a process model as the highest model, the
process model defining a dynamic process
cooperatively executed by a plurality of role
models as one process.
- 25 2. The information processing apparatus as set

forth in claim 1,

wherein the object model has:

a format model representing a pattern of a noun object and a verb object;

5 a feature model representing a feature of the object corresponding to an attribute value of the object and having a constraint condition corresponding to the environment; and

10 an object network model having a graph structure of which the name of the noun object is represented as a node and the name of the verb object is represented as a branch.

3. The information processing apparatus as set
15 forth in claim 1, further comprising:

a process function kernel portion for
executing a controlling process performed with an
intervention of a user of the information
processing apparatus using the name of a concerned
20 party for the process of the object network and the
name of a work performed by the concerned party.

4. The information processing apparatus as set
forth in claim 1,

25 wherein the specifications of the data model,

the object model, and the role model are statically defined, and

wherein the specifications of the process model are dynamically defined so that the validity
5 of the process performed in the set of the plurality of object modes is assured corresponding to a consistency constraint entity defined as an attribute of an object.

10 5. The information processing apparatus as set forth in claim 4,

wherein an inconsistent constraint entity corresponding to the process model describes a validity predicate about the validity of the
15 process and a control state for executing the process.

6. The information processing apparatus as set forth in claim 1,

20 wherein the hierarchical structure is further composed of:

a reference model for accomplishing a basic service to be executed in the process of the object network, the reference model being orthogonal to
25 the hierarchical structure of the data model, the

object model, the role model, and the process model.

7. The information processing apparatus as set forth in claim 6,

5 wherein the concerned party of the process and the process function kernel portion of the information processing apparatus use a reference driving function so as to accomplish a service of the reference model.

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8. The information processing apparatus as set forth in claim 6,

15 wherein the specifications corresponding to a change of the environment are separately described as static adaptation specifications and dynamic adaptation specifications as a service accomplished with the reference model.

20 9. The information processing apparatus as set forth in claim 1, further comprising:

 a WELL system as software using the object network and the common platform; and

 software exporting means for exposing the WELL system to another software.

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10. The information processing apparatus as set forth in claim 1, further comprising:

system structure designing means for designing
a system structure in such a manner that noun
5 objects and verb objects that compose the object
network correlate with data paths as keywords of
the system structure.